



BRULE RIVER STATE FOREST MASTER PLAN FACT SHEET *Endangered Resources*

- * The Brule River system has unique properties when compared to other streams in the Lake Superior basin.

- * Major natural communities of the Brule include boreal forest (spruce-fir), northern dry-mesic forest (white pine-red pine-red oak), northern dry forest (jack pine-Hill's oak), northern wet-mesic forest (white cedar-balsam fir-black ash), and alder thicket.

- * The "Brule Spillway" in the upper stretches of the Brule River contains extensive high quality stands of conifer swamp, pine forest, and alder thicket. These communities support numerous populations of rare plants and animals.

- * Most of the "old-growth" forest on the Brule is associated with the spillway. The concentration of spring ponds and seepages along this stretch of the river is also highly significant.

- * The second-growth boreal spruce-fir forests of the Lake Superior Clay Plain present the best restoration opportunity for this formerly extensive but now rare community on state lands within Wisconsin.

- * Seepage lakes, spring ponds, and spring runs within the state forest support many rare aquatic invertebrates.

- * The conifer-dominated forests along the Brule support a significant concentration of boreal birds. Many of these species are at their extreme southern range limits here. In the BRSF these species find extensive high quality habitat.

- * Surveys for rare species in and immediately around the state forest yielded the following results:

23 rare plant species, 40 rare animal species. 4 of these spp. are listed as "Endangered", 10 are listed as "Threatened", and 49 are considered "Special Concern".

At least two species of plants formerly known from the BRSF could not be relocated and they may now be extirpated.

- * Small remnants of the globally rare "pine barrens" community occur on the state forest and adjacent private lands. Maintenance and restoration is possible, but at a small scale.

- * Maintenance and restoration of natural pine forest is possible at small to moderate scales.

- * "Northern Hardwoods" management and protection opportunities exist at small scales.

- * Active and abandoned agricultural land in the Lake Superior Clay Plain supports grassland birds, including some uncommon species. Opportunities to maintain or expand these habitats on the state forest alone are very limited.

- * Significant natural features occur on privately owned lands within and just outside of the state forest boundary.
- * Natural features of high to moderate significance, or with restoration potential, occur on county forest lands adjoining or close to the State Forest.
- * The size and shape of the state forest and dominant land uses in the immediate landscape limit some largescale conservation opportunities.
- * Fire, historically a dominant force in portions of the Brule landscape, has been dramatically reduced.
- * Forest fragmentation is moderate to severe in the Lake Superior Clay Plain area.
- * Browse pressure from white-tailed deer is significant and especially noticeable in conifer swamp and boreal forest communities.

In 1995 the WDNR's Bureaus of Endangered Resources (BER) and Forestry planned a biotic inventory of the region in and around the Brule River State Forest (BRSF) to ensure that sufficient up-to-date information on the flora, fauna, natural communities and aquatic features of the property was available as a new master plan was developed.

Ecologist Eric Epstein and botanist Emmet Judziewicz conducted reconnaissance surveys on and around the BRSF during the summer and fall of 1995 to:

- 1) identify the natural communities present
- 2) assess their condition and potential to support rare species
- 3) prioritize survey and staffing needs for the 1996 field season.

Over the winter of 1995-96 BER compiled existing information on the hydrology, geology, soils, landforms, and biota of the Brule project area, examined maps and air photos, conducted interviews with agency staff, local naturalists, and scientists, and hired biologists to conduct field surveys during the coming season.

The field crew assembled to conduct the inventory work included an ecologist, a rare plant specialist, and two aquatic biologists. Specialists were brought in at appropriate times to survey resident birds, selected reptiles and amphibians, butterflies, and mosses and lichens.

All data collected during 1995-96 have now been processed and incorporated into the Biological Conservation Database, which is housed within BER's Natural Heritage Inventory. This information will be available to the master planning team for use when developing and analyzing management alternatives.

Preliminary results of our inventory project include the following highlights:

- 1) The "Brule Spillway" (aka the "Brule Bog"), which encompasses the upper reaches of the river corridor, is one of Wisconsin's ecological gems. Here we documented the presence of numerous rare plant and animal populations, extensive stands of high quality conifer swamp, remnant old-growth white pine-red pine forest, and a regionally significant concentration of springs and seepages.
- 2) Several of the rare species found on the BRSF are represented by the largest populations known in Wisconsin.

3) The second-growth, aspen-dominated forests near the mouth of the Brule represent the most significant opportunity to restore and manage for boreal spruce-fir forest on state-owned land.

4) Important but more limited opportunities occur on the BRSF to protect and manage natural communities such as pine barrens, dry pine-oak forests, mesic hemlock-hardwood forests, and small undeveloped kettle lakes.

5) Management of the lands surrounding the BRSF is extremely important, especially to insure long-term protection of the water quality of the Brule and its tributaries. There are opportunities to protect and manage regionally declining grassland species on both the clay plain near Lake Superior and in the barrens near the river's headwaters.

A report describing the natural features covered in this inventory project and interpreting the results of our work has been completed and will be available in mid-1999.